



Certificate of **Lubricant Competence**

1. Exploration & Refining
2. Base Oil Types and Characteristics
3. Basic Tribology
4. Lubricant Additives
5. Automotive Lubricants
6. Industrial Lubricants
7. Greases
8. Metalworking
9. Health, Safety & Environment
10. Certification Session

***Approach your line manager or training manager
and emphasise the benefits of taking part.***

This is your opportunity to sign up for the UKLA CLC course!

COURSE SUMMARY

Following the success of the two-year CLC courses, UKLA is offering the opportunity to enrol in a one-year course of 10 modules which will provide the same excellent foundation on the lubricants industry, cradle to grave - a complete basic lubricant training programme. Certification is achieved only on completion of the course, although attendance of specific individual modules is available.

THE COURSE CONTENT

The course covers the fundamentals of exploration, manufacture and formulation of lubricants and greases, product distribution and final disposal of the used lubrication products, with particular emphasis on the Health, Safety and Environmental issues lubricants and greases create.

WHO SHOULD ATTEND?

This course is primarily aimed at those who want to gain a thorough grounding on lubricants and lubrication. Plus, those who need to improve their skills and understanding by being brought up-to-speed on all the relevant information pertinent to the UK & European lubricants markets. It also provides a perspective on the global lubricant scene.

This course would especially benefit newcomers and recently promoted lubricants personnel, or those who feel they would like to broaden their knowledge, e.g. customer support, technical and non-technical personnel, sales and marketing, legal and lubricants distribution staff.

ANNUAL AND SINGLE MODULE PRICES

The applicable fees for the course are shown on the CLC Application Form, enclosed with this brochure. Fees are payable in advance and cover attendance and delegates notes for 10 modules. Travel and accommodation costs are not included in the fees.

COURSE DETAILS

Continuing with the proven syllabus this course is provided on a linked modular basis. To ensure students gain maximum benefit there is a test at the end of each of the nine separate one-day modules. The tenth module, which includes the final examination also includes a final industry related lecture, to give students food for thought and help initiate use of their newly gained knowledge. The exams are held on 'an open book exam' basis, you will be evaluated on understanding rather than recall and memorisation.

THE CERTIFICATE

The pass mark for Certification is 50%, with 'Distinction' set at 75% or above. Marks are calculated weighted equally from attendance, module test marks and the final examination mark. Full briefing notes are provided and we can also arrange catch-up sessions during the second year to enable students to stay on track for Certification.

Module 1

7th September 2010

EXPLORATION & REFINING

Covering the basic geology and formation of oil bearing strata, the geographical distribution of known oil reserves, the history of exploration, the formation of the Major Oil companies and a brief Industry history, refining and the progression of refinery technology from initial techniques through to current trends in modern technology.

Module 2

5th October 2010

BASE OIL TYPES & CHARACTERISTICS

Concentrating on the way refining and crude oil origin define the characteristics and properties of the resulting base oil and their subsequent best use. Covering areas such as Pour Point, Volatility, Oxidation Stability and the advantages and disadvantages of base oil's various properties to different types of blended lubricants.

Module 3

9th November 2010

BASIC TRIBOLOGY

This course element is designed to give a basic understanding of concepts such as ElastoHydroDynamic Lubrication, Boundary Lubrication and Extreme pressure conditions. This module also covers Anti-Wear, Fretting Corrosion and Tool Life in the context of the later course elements.

Module 4

7th December 2010

LUBRICANT ADDITIVES

An explanation of the basic additives used in the various categories of lubricants, their chemistry at a simplistic level, their function and their performance in respect of the Tribology covered in the previous element. This should not only relate to additives used in Automotive and basic Industrial lubricants, but should draw parallels with speciality areas such as Grease and Metalworking.

Module 5*11th January 2011***AUTOMOTIVE LUBRICANTS**

An enormous topic covering not only engine oils for both gasoline and diesel Engines, but transmission and hydraulic applications in addition. Following on from the additive module this session will highlight the application of the different additive chemistries, relating both types and treat rates to levels of performance and specifications. The history of specifications up to and including the latest ACEA performance levels will be covered.

Module 6*8th February 2011***INDUSTRIAL LUBRICANTS**

A comprehensive look at Hydraulic and Circulatory, Gear Oils, Open Gears, Slideway Oils etc. including particularly the importance of viscosity, and additive selection and relating strongly to both the Tribology and Additive elements. Basic guidance on selection of the correct lubricant and the importance of the Lubrication Survey and Rationalisation are included.

Module 7*8th March 2011***GREASES**

A science in itself, the use of grease, its different manufacturing considerations, additive types and the basic terminologies of Consistency, Penetration, Drop Point etc. are covered.

Module 8*5th April 2011***METALWORKING**

Metalworking Fluids have become an increasingly important part of the product portfolio of most lubricant companies. This element explores the basic

differences in chemistry and application between neat and watermix fluids, explains emulsions and emulsifiers at a simplistic level, covers the additive technology and different tribological implications when related to the previous modules. It provides a thumbnail sketch of the industries, which form the potential customer base.

Module 9*10th May 2011***HEALTH, SAFETY & ENVIRONMENTAL**

Covering the evolution of the Health and Safety of ingredients, risk assessment and a hands-on workshop to practice the technique. Risks from heavy metals, such as lead, together with the associated risks of using certain chemical components in formulations, such as sodium nitrite etc. in various categories of lubricants are addressed. It will also cover other issues such as biocides, middle order metals and discussing environmental legislation and trends. During this session other aspects are also covered relating to biodegradable lubricants, vegetable and ester basestocks and fluids used in the environment.

Module 10*7th June 2011***FINAL SESSION**

The final module includes a one and half-hour comprehensive examination, covering all the work covered in each module and an industry related final lecture, by a senior industry presenter. The day concludes with a formal presentation to students of BLF Certificates, which attest to their Lubricant Competence, two levels of pass are provided, these are 'Pass' and 'Distinction'.

Please complete the application form which is a separate document.

UNITED KINGDOM LUBRICANT ASSOCIATION LIMITED

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